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## \*\*\*\*ENGLISH ABSTRACT FOR SU 1640542 (CHERNOVITSKY) \*\*\*\*

File 351:Derwent WPI 1963-2003/UD, UM &UP=200321

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008856436 \*\*Image available\*\*
WPI Acc No: 1991-360457/\*199149\*

Determining optical anisotropy of transparent specimens - using coherent emission with flat wave front, mixing reference and object beams and projecting interference pattern into recording plane

Patent Assignee: CHERNOVITSY UNIV (UYCH-R)

Inventor: MEDUZHKO M A; STAINADKO M T; USHENKO A G Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week SU 1640542 A 19910407 SU 4682299 A 19890420 199149 B

Priority Applications (No Type Date): SU 4682299 A 19890420

Abstract (Basic): SU 1640542 A

The device uses an emission source (1) giving a highly coherent emission with a flat wavefront, a beam-splitter (2), rotating mirrors (3,4), an optical mixer (5), a magneto-optical modulator (6), an analyser (7) and a photomultiplier (8).

A reference and an object beam are formed and the interference pattern is projected into the recording plane. The distribution of the polarisation intensity and azimuths in the zero band is measured and are used to determine the optical anisotropy and the height of the micro-unevennesses in the surface of the specimen.

USE/ADVANTAGE - Optical anisotropy can, e.g. in crystal-optics, semiconductors etc., be determined with enhanced accuracy due to the range of linear measurements of intensity, corresponding to four orders of magnitude of the change in intensity in the zero band of the

interference pattern. The range of applications for the method is extended because it is possible to measure the height of micro-unevennesses in the surface of the specimen. Bul.13/7.4.91. (2pp.Dwg.No.1/1)

Derwent Class: S02

International Patent Class (Additional): G01B-011/30

31mar03 16:30:31 User015070 Session D8619.2 Sub account: SUGIM38.001AUS-CSP \$16.08 Estimated total session cost 0.066 Hrs.

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